II. Remarks

Claims 1-14 were pending in this application. Claims 1-11 were rejected and Claims 12-14 were objected to. The present amendment amends Claims 1 and 2 to more particularly point out and clarify Applicants' invention. No new matter has been added by the present amendment. After this amendment, Claims 1-14 will be pending.

Reconsideration of the application in view of the above amendments and following remarks is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1-2, 4-6 and 10-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 5,499,840 issued to Nakano ("Nakano"). In view of the amendments and remarks contained herein, Applicants respectfully submit that the rejections of Claims 1-2, 4-6 and 10-11 are traversed.

Claim 1 has been amended to recite that the air-bag arrangement comprises two air-bag units that are provided for each of at least the one of the vehicle seats. A sensor and control arrangement operably connected to the first and second air-bag units for deployment of the first and second air-bag. The sensor and control arrangement is configured to generate actuation signals such that only one of the first and second air-bag units that is closest to the point of impact is actuated. Support for these amendments may be found in Applicants' application at paragraphs [0033]-[0034].

Nakano discloses an air-bag arrangement for a motor vehicle that has two adjacent front seats 20A and 20B, *Nakano* at Col. 2, lines 52-56. Each seat 20A and 20B comprises a seat back frame 22 with a horizontally extending reinforcing rod 23 secured to the seat back frame 22. The reinforcing rod 23 is equipped at the outwardly and inwardly projected portions 23a and 23b with outside and inside air-bag units 41 and 42 for the corresponding seat 20A or 20B. The outside air-bag unit 41 has an air-bag 40a that is inflated between the immediately adjacent door 12a or 12b and a seat occupant, and the inside air-bag unit 42 has an air-bag 40b that is inflated between the seat occupant and the seat back 21 of the immediately adjacent seat 20B or 20A. *Id.* at Col. 3, lines 1-67.

In a first embodiment, the left and right side doors 12a and 12b of the vehicle each have a corresponding single first collision sensor (51a or 51b). Both of the first collision sensors 51a and 51b are connected with a control unit for inflation of the corresponding air-bag 40a of the outside air-bag unit 41 when a side vehicle collision is detected by one of the first collision sensors 51a or 51b immediately adjacent the collision. Within the inside lateral projections of the two seats 20A and 20B, there are installed second collision sensors 52a and 52b, which are not in communication with the either the control unit or the first collision sensors 51a and 51b. The second collision sensors 52a and 52b detect a hard collision of the inside lateral projection 21b of the seat 20A against the inside lateral projection 21b of the other seat 20b. Because the movement of the reinforcing rod is affected after the side door 12a or 12b abuts against the outside lateral projection 21a of the seat, the second sensor 52a or 52b is forced to issue a signal slightly after the first sensor

21a or 21b issues a collision signal to inflate the air-bag 40b of the inside air-bag unit 42. For example, upon a left side collision the first collision sensor 51a only senses the collision and thus, instantly inflates air-bag 40a of the outside air-bag unit 41 through a gas generator 44, and due to the collision of the left side door 12a against the outside lateral projection 21a of the driver's seat 20A, the reinforcing rod 23 of the seat 20A is forced to move inwardly causing a collision of the inside lateral projection 21b of the seat 20A against a projection 21b of the other seat 20B. The collision of the two inside lateral projections 21b is sensed by the second sensor 52a only and thus, the air-bag 40b of the inside air-bag unit 42 is instantly inflated via the gas generator 44. *Id.* at Col. 4, lines1-68. Notably in this first embodiment, the control unit forms a connection between only the first collision sensors 51a and 51b and the outside air-bag units 41 without forming any connection with the either the inside airbag units 42 or the second collision sensors 52a and 52b. Moreover, both the outside and inside air-bags 40a and 40b of the air-bag units 41 and 42 are inflated for a corresponding seat 20A or 20B during a side impact event.

In a second embodiment, the four air-bag units 41 and 42 of the two seats 20a and 20b are controlled by a common control unit to which the four collision sensors 51a, 52a, 51b and 52b are all connected. Upon a side collision applied to for example the left side door 12a, the outside air-bag 40a of the left seat 20A and inside air-bag 40b of the right seat 20B are inflated first, and then the inside air-bag 40b of the left seat 20A and the outside air-bag 40a of the right seat 20B are inflated. *Id.* at Col. 5, lines 1-20. Notably in this embodiment, when the first and second collision sensors 51a, 52a, 51b and 52b and the outside and inside air-bag

units 41 and 42 of both seats 20A and 20B are all connected to a common control unit, both the outside and inside air-bags 40a and 40b of the air-bag units 41 and 42 of each of the seat 20A and 20B are deployed during a side impact event.

This is unlike Applicants invention as recited in Claim 1 where a sensor and control arrangement is connected to the first and second air-bag units and is configured to sense a side impact of the vehicle and to generate actuation signals such that only one of the first and second air-bag units that is closest to the point of impact is actuated. In particular, Nakano discloses that both the outside and inside air-bags 40a and 40b of air-bag units 41 and 42 of a corresponding seat 20A or 20B are actuated to inflate in a side impact event and does not disclose teach or suggest a sensor and control arrangement that is operatively connected to both the outside and inside airbags 40a and 40b, and is configured to generate actuation signals such that only one of the outside and inside air-bags 40a and 40b that is closest to the point of impact is actuated. In that Nakano lacks the noted elements of Claim 1, Applicants respectfully submit that the rejections based thereon should be withdrawn.

In the Claim Rejections section of the Office Action, the Examiner posits that the sensors 51a and 51b and the control unit of Nakano are connected to both the outside and inside air-bags 40a and 40b, and that this arrangement is analogous to Applicants' claimed sensor and control arrangement, which is connected to the first and second air-bag units. Office Action at page 2. This is however not the case.

First, the sensors 51a and 51b in combination with the control unit for the first embodiment are not connected to both the outside and inside air-bags 40a and 40b

of a corresponding seat 20A or 20B. Rather, the sensor 51a and the control unit are operatively connected to only the outside airbag 40a of the left seat 20A, and the sensor 51b and the control unit are operatively connected to only the outside airbag 40a of the right seat 20B. In particular, "a conventional control unit is employed, which, upon the sensor 51a or 51b detecting the vehicle collision, energizes the gas generator 44 for inflation of the air-bag 40a". *Nakano* at Col. 4, lines 1-16. Accordingly, Nakano does not disclose either of the sensors 51a or 51b in combination with the control unit being connected to the inside airbag 40b of one of the corresponding seat 20A or 20B.

Second, even if the sensor and control arrangement of the present invention is erroneously considered to read on the control unit and all of the sensors 51a, 51b, 52a and 52b, Nakano still fails to disclose a system in which the inside airbag 40b of a corresponding seat only is actuated to inflate upon detection of an impact event where the inboard airbag 40b is closest to the point of impact. Accordingly and as discussed in the foregoing paragraphs, Nakano fails to disclose a sensor and control arrangement operatively connected to the outside and inside airbags 40a and 40b of a particular seat and which is configured to generate actuation signals such that only one of the outside and inside air-bags 40a and 40b that is closest to the point of impact is actuated.

In the Response to Arguments section of the Office Action, the Examiner states that Nakano discloses "a sensor 51a and a control arrangement configured to sense a side impact of the vehicle...and to generate actuation signals capable of actuating the airbag 40a which is closest to the driver side impact point (see column

4) and a sensor 52a generates actuation signals capable of actuating the inside airbag, in other words, the sensor 51a and a control arrangement is capable of actuating only the outboard airbag 40a but not the airbag 40b". Office Action at page 5. Contrary to the Claim Rejection section of the Office, the Examiner is now suggesting that the control unit and sensors 51a and 52b as recited in column 4 (i.e. the first embodiment) of Nakano are analogous to Applicants' claimed sensor and control arrangement. This also is not the case.

First, the only system in Nakano in which only one airbag for an individual seat 20A or 20B may be actuated by signals from the control unit is the first embodiment where the sensor 52a is not even connected to either the control unit or the sensor 51a. *Nakano* at Col. 4, lines 1-26. Thus, the sensor 52a in this embodiment acts independently of both the control unit and the sensor 51a and therefore, does not form any part of an arrangement with the control unit to generate actuation signals.

Moreover, the sensor 51a and 52a are not configured to determine which side of the vehicle has been impacted as is the sensor and control arrangement recited in Claim 1 of Applicants' invention. "Within the inside lateral projections 21a of the two seats 20A and 20B, there are installed second collision sensors 52a and 52b. These sensors 52a and 52b are of type which can detect a hard collision of the inside lateral projection 21b of the seat 20A against the inside lateral projection 21b of the other seat 20B. Because the movement of the reinforcing rod 23 is effected after the side door 12a or 12b abuts against the outside lateral projection 21a, the second sensor 52a or 52b is forced to issue a signal slightly after the first sensor

51a or 51b issues a collision signal". *Id.* The two sensors 51a and 52a are only capable of determining if one side of the vehicle has received an impact (e.g. the left side as illustrated in Figure 4), and if the lateral projection 21a of the seat 20A has received a hard impact. The hard impact on the lateral projection 21a could be due to an impact on the left or on the right side of the vehicle. The sensor 52a simply cannot distinguish between an impact on either the left or right side of the vehicle. Therefore, the sensors 51a and 52a in combination can only determine if an impact has occurred on the one side of the vehicle and not the other side and accordingly, are not configured to determine which side of the vehicle has been impacted.

Furthermore, the two sensors 51a and 52a are not configured to generate actuation signals such that only one of the inside and outside airbags 40b and 40a that is closest to the point of impact is actuated. In the first embodiment, the two sensors 52a and 51a independently control actuation of the inside and outside airbags 40b and 40a. Notably, the sensor 52a is the only means for operably actuating the inside airbag 40b. However, Nakano fails to disclose a mechanism by which the inside airbag 40b alone is inflated as a result of an impact on the opposing side of the vehicle. The sensor 52a is only able to determine that the lateral projection 21a of the seat 20A has suffered a hard impact, which might occur as a result of an impact on either the left or right side of the vehicle. In the second embodiment, both the inside and outside airbags 40b and 40a are actuated by the control unit and not only one of the airbags 40b or 40a, which is closest to the point of impact. Accordingly, the two sensors 51a and 52a are not analogous to Applicants' present invention as recited in Claim 1 where the sensor and control

arrangement is configured to generate actuation signals such that only one of the first and second air-bag units that is closest to the point of impact is actuated.

Finally, merely showing that "the sensor 51a and a control arrangement is capable of actuating only the outboard airbag 40a but not the airbag 40b" (see Office Action at page 5) as a result of an impact on one side of the vehicle without showing that only the inside airbag 40b inflates as a result of an impact on the opposing side when the sensor 51a and control arrangement disclosed in Nakano is not even operatively connected to the inside airbag 40b is not a correct interpretation of Claim 1. Rather, Claim 1 requires the sensor and control arrangement to be operatively connected to the first and second air-bags and to be configured to generate relevant actuation signals in the event of a side impact on either side of the vehicle and not just on one side of the vehicle.

Accordingly, Applicants believe that Claim 1 and its dependent Claims 2, 4-6 and 10-14 are in a condition for allowance.

Rejections under 35 U.S.C. § 103

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakano in view of U.S. Pat. No. 6,123,357 issued to Hosoda, et al. ("Hosoda"). In view of the amendments and remarks contained herein, Applicants respectfully submit that the rejection of Claim 3 is traversed.

Since Claim 3 depends on Claim 1 and since Hosoda fails to disclose a sensor and control arrangement operatively connected to the first and second air-bag units and configured to generate actuation signals such that only one of the first

and second air-bag units that is closest to the point of impact is actuated, the combination of Nakano and Hosoda cannot render the Claim of the present invention as obvious. The rejection under section 103(a) is therefore improper and should be withdrawn.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakano in view of United Kingdom Patent Application No. GB-2309440 ("GB '440"). In view of the amendments and remarks contained herein, Applicants respectfully submit that the rejection of Claim 7 is traversed.

Since Claim 7 depends on Claim 1 and since GB '440 fails to disclose a sensor and control arrangement operatively connected to the first and second air-bag units and configured to generate actuation signals such that only one of the first and second air-bag units that is closest to the point of impact is actuated, the combination of Nakano and GB '440 cannot render the Claim of the present invention as obvious. The rejection under section 103(a) is therefore improper and should be withdrawn.

Claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakano in view of U.S. Pat. No. 5,531,470 issued to Townsend ("Townsend"). In view of the amendments and remarks contained herein, Applicants respectfully submit that the rejections of Claims 8-9 are traversed.

Since Claim 8-9 depend on Claim 1 and since Townsend fails to disclose a sensor and control arrangement operatively connected to the first and second air-bag units and configured to generate actuation signals such that only one of the first and second air-bag units that is closest to the point of impact is actuated, the

combination of Nakano and Townsend cannot render the Claims of the present invention as obvious. The rejections under section 103(a) are therefore improper and should be withdrawn.

Accordingly, Applicants believe that Claims 3, 7-9 are in a condition for allowance.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present form of the claims are patentably distinguishable over the art of record and that this application is now in condition for allowance. Such action is requested.

Respectfully submitted,

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